Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A method implemented on a protection CMTS for providing redundancy for a cable network having a working CMTS that provides normal service to a cable modem and the protection CMTS which takes over service to the cable modem should service from the working CMTS become unavailable, the method comprising:

(a) at least partially registering the cable modem with the protection CMTS prior to the working CMTS becoming unavailable; and

(b) assuming a protection state in which the protection CMTS can take over service of the cable modem should its service with the working CMTS become unavailable,

wherein the cable modem is informed of an upstream channel of the protection CMTS.

2. (original) The method of claim 1, wherein registering comprises specifying at least one of a transmission power, a transmission time slot, and a transmission frequency at which the cable modem is to communicate with the protection CMTS should the cable modem service with the working CMTS become unavailable.

3. (original) The method of claim 1, wherein registering comprises specifying one or more parameters as specified by DOCSIS.

4. (original) The method of claim 1, wherein registering comprises noting an IP address for the cable modem, which IP address is used in communications between the cable modem and the working CMTS.

5. (original) The method of claim 4, wherein the protection CMTS obtains the cable modem IP address in a communication from the cable modem.

6. (original) The method of claim 4, wherein the protection CMTS obtains the cable modem IP address in a communication from the working CMTS.

7. (original) The method of claim 1, wherein the service provided to the cable modem includes telephony service.

8. (original) The method of claim 1, wherein during the protection state, the protection

CMTS periodically establishes communication with the cable modem.

9. (original) The method of claim 8, wherein the communication includes instructions to the cable modem to adjust at least one of a transmission power and a transmission frequency at which the cable modem is to communicate with the protection CMTS should service with the working CMTS become unavailable.

10. (previously presented) The method of claim 1, further comprising:

(c) determining that the working CMTS's service to the cable modem has or will become unavailable; and

(d) taking over service to the cable modem.

11. (currently amended) A method implemented on a protection router for providing redundancy in a network having a working router that provides normal service to a host and the protection router which takes over service to the host should service from the working router become unavailable, the method comprising:

(a) at least partially registering the host with the protection router prior to the working router becoming unavailable; and

(b) assuming a protection state in which the protection router can take over service of the host should its service with the working router become unavailable, wherein the service includes telephony service, [[and]]

wherein the [[cable modem]] host is informed of an upstream channel of the protection router.

12. (original) The method of claim 11, wherein the network is a wireless network.

13. (previously presented) A CMTS designed or configured to act as a protection CMTS for a cable network having a working CMTS that provides normal service to a cable modem and the protection CMTS which takes over service to the cable modem should the service from the working CMTS become unavailable, the CMTS comprising:

(a) one or more processors;

(b) memory in communication with at least one of the one or more processors; and

(c) wherein at least one of the one or more processors are configured to store registration data for the cable modem in the memory, and wherein the CMTS is configured to not provide communication service to the cable modem unless the service from the working CMTS

should become unavailable and wherein the CMTS is configured to store the registration data at a time prior to the working CMTS becoming unavailable,

wherein the cable modem is informed of an upstream channel of the CMTS.

14. (original) The CMTS of claim 13, wherein the registration data includes at least one of a transmission power, transmission time slots, and a transmission frequency at which the cable modem is to communicate with the protection CMTS should the cable modem service with the working CMTS become unavailable.

15. (original) The CMTS of claim 13, wherein the processors and memory are configured to implement DOCSIS.

16. (original) The CMTS of claim 13, wherein the registration data includes an IP address for the cable modem, which IP address is used in communications between the cable modem and the working CMTS.

17. (original) The CMTS of claim 13, wherein the processors and memory are configured to periodically establish communication with the cable modem.

18. (original) The CMTS of claim 13, wherein the CMTS is designed or configured to perform routing operations.

19. (previously presented) A computer program product comprising a machine readable medium on which is stored program instructions for a method implemented on a protection CMTS, the method providing redundancy for a cable network having a working CMTS that provides normal service to a cable modem and the protection CMTS which takes over service to the cable modem should the service from the working CMTS become unavailable, the program instructions comprising instructions for:

(a) at least partially registering the cable modem with the protection CMTS prior to the working CMTS becoming unavailable; and

(b) assuming a protection state in which the protection CMTS can take over service of the cable modem should its service with the working CMTS become unavailable,

wherein the cable modem is informed of an upstream channel of the protection CMTS.

20. (original) The computer program product of claim 19, wherein the instruction for registering requires specifying at least one of a transmission power, a transmission frequency, and transmission time slots at which the cable modem is to communicate with the protection CMTS should the cable modem service with the working CMTS become unavailable.

21. (original) The computer program product of claim 19, wherein the instructions for registering comprise operations compliant with DOCSIS.

22. (original) The computer program product of claim 19, wherein the instructions for registering comprise instructions for noting an IP address for the cable modem, which IP address is used in communications between the cable modem and the working CMTS.

23. (original) The computer program product of claim 19, further comprising instructions for periodically establishing communication with the cable modem which the protection CMTS is in the protection state.

24. (original) The computer program product of claim 19, further comprising instructions for:

(c) determining that the working CMTS's services to the cable modem has become unavailable; and

(d) taking over service to the cable modem.

25. (previously presented) A method implemented on a protection CMTS for providing redundancy for a cable network having a working CMTS that provides normal service to a cable modem and the protection CMTS which takes over service to the cable modem should service from the working CMTS become unavailable, the method comprising:

(a) at least partially registering the cable modem with the protection CMTS prior to the working CMTS becoming unavailable;

(b) thereafter, determining that the working CMTS's service to the cable modem has become unavailable; and

(c) taking over service to the cable modem,

wherein the cable modem is informed of an upstream channel of the protection CMTS.

26. (original) The method of claim 25, wherein taking over service comprises using registration parameters for the cable modem, which registration parameters were previously provided to the protection CMTS.

27. (original) The method of claim 26, wherein the registration parameters include an IP address for the cable modem, which IP address is used in communications between the cable modem and the working CMTS.

28. (original) The method of claim 26, wherein the registration parameters include at

least one of a transmission power, a transmission frequency, and transmission time slots at which the cable modem is to communicate with the protection CMTS should the cable modem service with the working CMTS become unavailable.

29. (original) The method of claim 25, wherein the service provided to the cable modem includes telephony service.

30. (original) The method of claim 25, wherein determining that the working CMTS's service to the cable modem has become unavailable comprises receiving a communication indicating such unavailability from at least one of the cable modem and the working CMTS.

31. (original) The method of claim 25, further comprising providing routing services to one or more cable modems in the cable network.

32-36. (canceled)

37. (original) The method of claim 30, wherein the communication indicating unavailability is a downstream channel change request.

38. (currently amended) A cable modem designed or configured for use on a cable network having a first CMTS that provides normal service to a cable modem and a second CMTS which takes over service to the cable modem should the service from the first CMTS become unavailable, the cable modem comprising:

(a) a cable network interface; and

(b) memory[[; and]],

[[(c)]] wherein the cable modem is configured to

register with the first CMTS,

be informed of an upstream channel for the second CMTS,

register with the second CMTS using the upstream channel for the second CMTS, and

store registration data obtained from the second CMTS.

39. (previously presented) The cable modem of claim 38, wherein the registration data further comprises an IP address that is used for communications through both the working CMTS and the protection CMTS.

40. (previously presented) The cable modem of claim 38, wherein the registration data includes (i) at least one of a transmission power, transmission time slots, and a transmission frequency at which the cable modem is to communicate with the protection CMTS should the cable modem service with the working CMTS become unavailable, and (ii) similar transmission data for communication with the working CMTS.

41. (previously presented) The cable modem of claim 38, wherein the cable modem is designed or configured to implement DOCSIS.

42. (previously presented) The cable modem of claim 41, wherein the cable modem is designed or configured to send a channel change response in response to a downstream channel change request from the working CMTS.

43. (previously presented) A protection CMTS for providing redundancy for a cable network having a working CMTS that provides normal service to a cable modem, the protection CMTS taking over service to the cable modem should service from the working CMTS become unavailable, the protection CMTS comprising:

(a) means for at least partially registering the cable modem with the protection CMTS prior to the working CMTS becoming unavailable; and

(b) means for, prior to the working CMTS becoming unavailable, assuming a protection state in which the protection CMTS can take over service of the cable modem should its service with the working CMTS become unavailable,

wherein the cable modem is informed of an upstream channel of the protection CMTS.

44. (previously presented) The method of claim 1, further comprising:

after registration, but before the protection CMTS takes over, requesting that the cable modem change one or more parameters to optimize communication on a path between the protection CMTS and the cable modem.

45. (previously presented) The method of claim 11, further comprising:

after registration, but before the protection router takes over, requesting that the cable modem change one or more parameters to optimize communication on a path between the protection router and the cable modem.

46. (previously presented) The cable modem of claim 38, wherein the cable modem is configured to be informed of the second CMTS's upstream channel by the first CMTS.